University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Library Philosophy and Practice (e-journal)   Libraries at University of Nebraska-Lincoln

INTERROGATING THE CONTRIBUTIONS OF ICT ACQUISITION AND APPLICATION TO EFFECTIVE LIBRARY SERVICE DELIVERY IN NIGERIA

Gabriel Aine Obinyan Dr
Ambrose Alli University, ainetoy@yahoo.ca

STANLEY OMONDIALE UNUABOR Mr
stanleyunuabor@yahoo.com

INTRODUCTION

As the world is growing technologically, library operations in various locations in the world are no longer how they use to be. Libraries in Nigeria since the beginning of the 21st century have started making efforts to metamorphose from being institutions driven by manual processes into modern ones where operations are in part or wholly dependent on ICT applications. The versatility of ICT driven library operations that would adequately and efficiently meet the information needs of patrons has been widely acknowledged in extant literature to the extent that most academic libraries in Nigeria are positively inclined towards computerizing their operations. Although none of the academic libraries in the country has completely been automated or computerized, many are at varied and deferring stages of adaptation in having their operations ICT driven or ICT dependent. Academic libraries are libraries that are attached to post secondary institutions and they are as varied and distinctive as the institutions they are established to serve providing information services to faculty members, students, researchers and other scholarly inclined persons.

Academic libraries can be categorized into university libraries and non-university libraries (Aina, 2004). Universities libraries are the best developed type of academic libraries in Africa; they are better funded compared with other types of libraries, they provide the type of information services that could be found elsewhere in the world. In Nigeria, for example, it is mandatory that at least 5% of the total budget of the universities is allocated to the libraries (Ifidon, 1999) for effective development to take place in all its ramifications. The situation in Nigeria presently, is such that there are a lot of disparate ICT programmes and projects that are being undertaken in isolation of each other thereby leading to wastage of resources, and inadequate sharing of infrastructure and information, (Mutula and Moahi, 2008). This checkered scenario could be blamed to a very large extent on haphazard selection and uninformed acquisition of ICTs by the libraries in so far as they continue to exhibit unfettered dependency or reliance on untested vendors and on ad hoc consultations with business colleagues.

Laying credence to poor selection and acquisition of ICT by libraries outside low level of skilled personnel is the fact that in Sub-Saharah Africa which of course includes Nigeria, most of the technologies were transplanted without provision to re-engineer the

technologies to suit local conditions (Woherem, 1993). Uncanny as this practice seems to be, attempts at technological development through adaptation in Nigeria continue without taken into consideration the country's poor power infrastructure, inefficient electricity supply, and low cognitive capacity of the receiving organizations. Similarly, software applications are still based on western models and do not take into account local cultural sensitivity. For meaningful ICT impact therefore, several studies have suggested objectives and rationale for national information policy, be it at institutional, national or regional levels, so as to protect existing services and resource base, … methodologies, opportunities and circumstances required in order to increase libraries' effectiveness and efficiency (MacDonald, 1986).

Information is not only very essential as a resource for national development, it is also very essential for the success of libraries and information centres in Nigeria. The acquisition and application of ICT facilitates access to a wide range of information resources and databases irrespective of their geographical locations, distance impedance and time. Application of ICT in libraries has helped librarians and information specialists, and researchers to improve their information products and services through enhanced search outcomes in terms of specificities of documents retrieval, provision/dissemination and use of requisite information retrieved or generated. ICT has become an important field for all information professionals; this is because of perceived relevance, and practical applications to tasks in libraries and information centres (Aina, 2004). ICT therefore includes the technologies use for communication and information handling. Foremost among the ICT components that have offered these opportunities include; computers, Internet, tele facimile C.D ROM and electronic based-devices whose users depend largely on telecommunication facilities or gadgets. Chisenga (1995) acknowledges the role of ICT application according to him has improved the service delivery of libraries and allied institutions responsible for providing information products and services to a variety of clientele. Whichever library or institution that has these technologies can have world wide access to as much information that would reasonably meet the needs of clientele or patrons (Chisenga, 1995). This could be said to be unambiguously so in the developed and technologically advanced countries of the world

than the situation is in developing countries hence according to Ekoja (2007), the virtual library for now, is more of an opportunity for the developed countries.

The scarce availability and use of ICT in academic libraries in Nigerian universities has not changed significantly in order to compare favourably with the status their counterparts in the developed countries have reached (Abifarin, 1993). The level of underdevelopment in Nigeria and the frequency of infrastructural failure and decay make it near-impossible for academic libraries to acquire and apply the necessary ICT components that could bring about better and efficient information services. In contemporary Nigerian society, however, only a few university libraries and information centres have achieved satisfactory level of ICT acquisition and application. The general high aspirations of the university libraries to embrace as much as possible acquisition and use of ICT tools within limit of resources available to them (Ogunrombi and Marama, 1995), often suffers lots of setbacks due to lack of funds, low cognitive capability of most librarians in ICT use skills, and lack of stakeholders' significant commitment to full integration of ICT into library systems.

Library aspirations are generally informed as a result of the fact that no one library would like to be left behind by other libraries of similar status. As Nigerian university libraries increasingly embrace ICT, it behooves on the librarians including the university librarians, to acquire the necessary skills including technology literacy that would enable them function much more effectively in the provision of information with a view to serving the clientele better (Solanje and Chisenga, 1995) in the emerging digital environment. With inadequate skills and poor electricity supply among other intractable problems arising from poor funding, the nature of information services that patrons receive from academic libraries since the advent and use of ICT could not be adjudged in many instances to be exceptionally different from what they used to be. This line of thought may have propelled Fatoki (2004) to emphasize in her study the significance of the necessity for ICT availability in the university libraries and the challenges they offer. There is no doubt that many librarians in Nigeria university libraries where ICT tools are available and installed are unable to put them to maximum use. This is largely due to the nature of professional training the librarians and information science professionals have received in years past and the failure of some of them to develop themselves by acquiring

ICT skills on the job (Fatoki, 2004). Failure to decisively address and have this situation corrected could pose a serious setback to Nigeria university libraries' efforts to provide adequate information services to their numerous users in years to come.

Although the usefulness and claims of ICT to the effectiveness and efficiency of university libraries in serving their patrons have been established in extant literature, it remains to be seen from the results of previous studies the tangible benefits and contributions academic libraries in Nigeria have consistently derived from ICT acquisition and application. Interrogating the absolutism of the acclaimed usefulness of ICT in libraries' operations, some universities libraries have demonstrated limited enthusiasm in the acquisition and application of ICT to leverage their internal operations as well as meet and satisfy myriads of patrons' queries and information needs. Very many university libraries that have embraced ICT technologies still lag behind their counterparts in technologically developed nations where informed acquisition and application of requisite ICT tools for effective operations is the dominant paradigm. Although many academic libraries in Nigeria have made efforts to be ICT compliance, the fact remains that such efforts have been on ad hoc basis and the results from such efforts have been disapproving particularly so that they appeared to have created more problems than solutions. It is against this background that this study was conducted to interrogate the actual contributions ICT acquisition and application have made towards effective library service delivery in Nigeria.

OBJECTIVES OF THE STUDY

The main objective of the study is to ascertain the contributions – positive or negative, ICT acquisition and application have made to the development of academic libraries in Nigeria. To achieve this, the under listed specific objectives were formulated.

i. To ascertain the perceived reasons impelling academic libraries in Nigeria to acquire ICT.

ii. To find out the level of ICT proficiency of librarians in academic libraries in Nigerian universities.

iii. To determine the extent to which ICT is applied in performing operations in academic libraries in Nigeria.

iv.   To determine the factors inhibiting acquisition and application of ICT in academic libraries in Nigerian universities.

v.   To ascertain the benefits academic libraries in Nigeria derive from ICT acquisition and application.

RESEARCH QUESTIONS

In interrogating the actual and potential contributions of acquisition and application of ICT towards the effectiveness of academic libraries in Nigeria in information service delivery, the following research questions were asked for answers to be proffered:

1. What are the perceived reasons that impel academic libraries in Nigeria to acquire ICT?

2. What is the level of computer literacy/proficiency of librarians in academic libraries in Nigerian universities?

3. To what extent has ICT been applied in performing technical operations in academic libraries in Nigerian universities in readiness for effective service delivery?

4. What are the factors inhibiting acquisition and application of ICT in academic Libraries in universities in Nigeria?

5. What are the benefits academic libraries in universities in Nigeria derive from the acquisition and application of ICT?

LITERATURE REVIEW

Library automation, library computerization and mechanization can be interchangeably used. Glossary of Library and Information Science (1983) defines automation as the performance of an operation, a service or a process by self activating, self controlling, or automatic means. Library automation therefore implies the use of automatic data processing equipments such as computers or other labour saving devices in performing library operations. The goal of library automation according to Ojedoken (2008) is to free library and information professionals from the routine of clerical work, and force librarians to pay attention to the end users. With improved and efficient computers to leverage library services, library clientele are no longer satisfied with a kind of library response that reeks or shows signs of library work being laborious or cumbersome. In paying attention to the end users is indeed upholding the thrust of

Ranganathan's fourth law of library science that stipulates library users' time should not be wasted.

To this end, it becomes more important to make materials available to users as quickly as possible since people want information now, not tomorrow, next week, or next month (Ifidon and Ifidon, 2008). The need to actualize this, has propelled many libraries to do away with the idea of local self-sufficiency in collection of facts and information bearing materials which now requires a type of cooperation that would in turn, dictates the needs for fast response computerized union catalogues and their ancillary network apparatus. Similarly, self-sufficiency in library automation development would certainly shrivel and come to an end in the era of ICT consortium. The astounding ICT driven collaboration among libraries holds many benefits for those libraries with the requisite well withal to harness the innovation for greater effect.

African libraries have not maximized the potentials of computers in enhancing the quality of information services (Garcha and Buttler, 1996) hence it was observed by Rosenberg (1998) that full-scale automation of library operations is rare in Africa. Although university libraries championed the use of information technology (IT) in libraries, the espousal and use of ICT differ widely between libraries (Rosenberg, 1998) thereby producing a mosaic picture of efforts so far made to harness the gains of ICT acquisition and applications in the libraries. In Nigeria for example, computerized catalogues, particularly of serials collections in academic libraries, represent the sections where computers are commonly used, at least during the 1980s. By 1996 according to Garcha and Buttler (1996), only nine (9) universities libraries amongst the libraries in Ghana … and none in Nigeria had automated its card catalogues. The situation today is not as gloomy as it was at the epoch Garcha and Buttler (1996) carried out their study.

According to Falaiye (2002), a library is said to be automated when its system can perform some of the entire basic library processing operations such as cataloguing, acquisitions, circulation, on-line information access. This definition to say the least is poorly captioned; if anything, it should be tagged partial library automation or better still partial library computerization which is a situation where library-based computer systems can perform some out of the many library operations. The reason many libraries nowadays strive to get on the bandwagon of having their operations automated or

computerized could be seen more as a response to satisfy one of the National University Commission's (NUC) preconditions for accreditation than a conviction born out of professional consideration and efficiency. To this end, libraries pay much money to register for online data-bases in order to have access to vast amount of information on the internet (Odion and Adetona, 2009). Furthermore, they argued that the rationale behind the digital library is to facilitate access to electronic information, printed materials, and library services to ensure that information needs of users and communities are met regardless of their locations.

Vinitha, et al (2006) contributing, affirmed that libraries that used to be considered only as the storehouse of knowledge have got a new outlook in the modern ICT era. The activities that were carried out manually in libraries with so much stress and strains are now being carried out smoothly with the help of ICT with greater effectiveness. Library organization, administration and other technical processing have become easier and a quantum of work can be done in a relax mood. ICT which is the basis for the transformation of libraries, continues to generate more result at a given time; it is both an engine that can be used in many ways; an implement in the hands of the professional librarians. As a tool, it cannot replace librarians but rather it enhances and improves their effectiveness and efficiency on the job (Vinitha, et al, 2006). Jaiyeola (2007) lending weight to the discourse on integrating ICT into library systems espoused that it has become imperative to deploy information systems and related technology to achieve valid objectives with due consideration to efficiency, productivity, and profitability; and as a tool for librarians, it is actually addressing digital librarians that are the librarians of the 21st century who keep pace with digital technology to collect information and cope with proliferation of data, filtering, sorting, compiling, analyzing and disseminating such information in a way that adds real value to the library as an organization.

The rapid growth in computerization of libraries has led to a sudden rise in automation and global advances in information handling and dissemination. The library being a key player in information handling processes must be attuned to those advances as procurer, organizer, custodian and disseminator of information in this new millennium (Daniel 1999). However, with the convergence of ICT, the librarian may not be able to

boast for too long of his professional monopoly of knowing it all simply because he knows where and how to get information in this 21st century. Libraries are already having great challenges in getting information quickly and accurately (Ajielye and Joseph, 2002). There is no doubt that the profession is fast losing its jurisdiction to allied professions like computer science that are also interested in information processing, packaging and dissemination. Furthermore, the rapid advances in ICT are offering new potentials for producing and distributing knowledge. These technologies have fundamentally altered the way people live and work as well as the way they learn, and have the world transformed into a global community (Educational Testing, 2003). In spite of the benefits ICT could offer stakeholders in academic libraries in Nigeria, they are still unable to adequately utilize the technologies to enhance development in libraries to foster access to global networks without hiccups. That acquisition and application of ICT provide impetus for growth at all levels of development, the processes have not been without inhibiting problems which Ojedokun (2007) outlined as:-

- Inadequate funding

- Epileptic power supply

- Limited computer/ information technology literacy

- Ineffective planning and

- Poverty and lack of skilled manpower and inadequate skilled manpower.

These seemingly intractable challenges facing academic libraries in Nigeria have the capability of consistently robbing the libraries and the users the enablement to function appropriately and effectively in creating and adapting knowledge to new situations in this age of globalization. Until these problems/challenges are resolved, the contribution of ICT to libraries will continue to be interrogated.

RESEARCH METHODS

The survey research method was adopted in this study because it involves systematic and comprehensive collection of information about opinions, attitudes, feelings, beliefs of people without any form of control or manipulation of variables. The population of study comprises professional librarians drawn from 20 randomly selected Federal and State Universities in Nigeria. The instrument used in collecting data for the study was a questionnaire with Crobach alpha (α) = 0.86. One hundred and fifty (150)

copies of the questionnaire were randomly administered on the respondents. In all 120 copies of the completed questionnaire were retrieved to give 80.0% return rate. Analysis of the dataset generated for the study was done using such descriptive statistics as frequency counts and simple percentages in tabular forms.

Gender Distribution of Respondents

Giving credence to gender analysis in research, Obinyan (2011) observed that simple as the issue may have appeared to be, gender analysis can no longer be relegated in contemporary academic research in the behavioural sciences since the clamour for women liberation and empowerment began. Table 1 shows the gender composition of the respondents.

Table 1: Distribution of Respondents by Gender

S/N	Gender composition	Frequency	Percentage (%)
1	Males	48	40
2	Females	72	60
	Total	120	100

With 72 (60.0%) of the respondents being females and the rest 48 (40%) of the respondents being males presented a platform for the conclusion to be drawn that more females than males work in academic libraries in Nigerian universities. In other words, females could be adjudged to be more positively predisposed towards growing career within the framework of librarianship as practicing librarians than males. This finding is at variance with Haliso (2011) finding in his study of factors affecting information communication technologies use by academic librarians in southwestern Nigeria. In the study, he reported 119 (77.8%) of the respondents being males as against 34 (22.2%) female respondents.

AGE OF RESPONDENTS

Age of respondents is in most cases found to be critical in research particularly so as it is expected to correlate with maturity and ability to perform creditably on the job.

Table 2 shows the age distribution of the responding library staff that participated in the study.

Table 2: Distribution of Respondents by Age

S/N	Age Bracket in Years	Frequency	Percentage (%)
1	19-25	-	-
2	26-34	42	35.0
3	35-49	50	41.7
4	50 & above	28	23.3
	Total	120	100

From the table, it could be said that 35-49 years age bracket had the highest concentration of library staff with 50 (41.7%) respondents. This was, however, followed by 26-34 years age bracket with 42 (35.0%) respondents. The least number of respondents as Table 2 has shown falls into the age bracket of 50 years and above as represented by 23.3% relative frequency. In the final analysis, it could be argued that majority of the respondents that participated in the study are within the expanded age bracket of 26-49 years. From this result, it could be argued that the population of library staff in university libraries in Nigeria is a young one.

Table 3: Distribution of Respondents by Qualification

S/N	Quantification of Respondents	Frequencies	Percentage (%)
1	OND	22	18.3
2	BA/ B. Sc/BLS	56	46.7
3	MA/M. Sc/MLS	30	25.0
4	PhD	12	10.0
	Total	120	100

Table 3 depicts the distribution of respondents by qualification. The highest number of the respondents as represented by 46.7% had first degree. This was followed by 30 (25.0%) respondents that had master's degree. Holders of OND and PhD among the responding library staff were fewer in number as indicated by the relative frequencies of 18.3% and 10.0% respectively. This type of result could be expected of an organization like the library that requires highly trained intelligent and skilled employees to effectively

service the information needs and diverse queries of users in the emerging digital academic environment. For academic librarians to live up to expectations as the polymath they are known to be higher degrees in library and information science as well as in allied discipline of information science, computer science and ICT technology become invaluable particularly in the 21st Century Nigeria when digital environment is gaining in acceptance and relevance as possible work environment.

PERCEIVED REASONS ACADEMIC LIBRARIES ACQUIRE ICT

The acquisition of any form of technology is often underpinned by the expected benefits – tangible or intangible – to be derived from the application of the technology. Table 4, therefore, depicts the perceived reasons that impelled ICT acquisition by academic libraries in Nigeria. Emphasis was laid on respondents' perceived reasons rather than what they would call actual reasons because of lack of totality of variously claimed benefits academic libraries in Nigeria derive from ICT acquisition and application in meeting their corporate objectives. To gain more insight into the issues, research question one was asked to be addressed and answered.

Research Question 1: What are the perceived reasons that impel academic libraries in Nigeria to acquire ICT?

Table 4: Perceived Reasons Academic Libraries Acquire ICT

S/N	Reasons for ICT acquisition	Strongly Agreed (%)	Agreed (%)	Disagreed (%)	Strongly Disagreed (%)	Total (%)
1	To speed up library operations	106 (88.3)	-	14 (11.7)	-	120 (100%)
2	To ensure delivery of quality services	50 (41.7)	30 (25.0)	34 (28.3)	6 (5.0)	120 (100%)
3	Because of high storage capacity	50 (41.7)	12 (10.0)	28 (23.3)	30 (25.0)	120 (100%)
4	To facilitate cataloguing and classification	74 (61.7)	6 (5.0)	2 (1.6)	38 (31.7)	120 (100%)
5	To Facilitate acquisition process	100 (83.3)	-	-	20 (16.7)	120 (100%)
6	To ease Charging and discharging of books	100 (83.3)	-	-	20 (16.7)	120 (100%)
7	For effective serials management	100 (83.3)	-	-	20 (16.7)	120 (100%)
8	To retain relevance	120 (100%)	-	-	-	-

Foremost among the perceived reasons academic libraries in Nigerian universities acquire ICT as contained in Table 4 include the need to retain relevance in the eyes of the users and the public with 100% respondents strongly agreeing; and the needs to speed up library operations (88.3%), facilitate acquisition process (83.3%), charging and discharging of books (83.3%), and effective serials management (83.3%) with the percentage respondents strongly agreeing in parenthesis. Other critical reasons that impel academic libraries in Nigerian universities to acquire ICT had to do with the high storage capacity the technology can provide as indicated by 50 (41.7%) respondents strongly agreeing, the need to facilitate cataloguing and classification as strongly indicated 74 (61.7%) respondents also constitutes possible reason for the acquisition of ICT by academic libraries.

The result contained in Table 4 provides a reflection of academic librarians' awareness of the usefulness and benefits of informed acquisition and application of ICT. According to the respondents, the perceived reasons have so far not been actively and proportionately matched with the promised benefits because of lack of full integration and widespread use of ICT in library operations. It could be argued that most academic libraries in Nigeria are laggards when it comes to adoption of ICT and hence the variability and existing checkered computerization efforts being made in the various academic libraries in the country. The respondents were, however, unanimous and positive in their claim that the university librarians in Nigeria are the impelling elements for the horrific state of things in the libraries inasmuch as they remain ignorant and unwilling traditional librarians that needed to be goaded and pushed in order record even the minutest achievement that could be contrived.

In response to the perceived reasons or needs academic libraries in Nigeria acquire ICT, the following range of ICT tools in Table 5 are often acquired by the libraries.

Table 5: Range of ICT Acquired by Academic Libraries

S/N	Range of ICT		Yes	%	No	%
1	Computers		120	100	-	-
2	Printer	Monochrome	120	100	-	-
		Coloured	50	41.7	70	58.3

3	Scanners	100	83.3	20	16.7
4	Digitizers	23	19.2	97	80.8
5	Digital camera	23	19.2	97	80.8
6	Barcode readers	5	4.2	115	95.8
7	Close circuit television (CCTV)	-	-	120	100
8	Mobile phones	120	100	-	-
9	Landline Telephone	12	8.3	110	91.7
10	Reprographic machine with embedded software	-	-	120	100
11	Photocopiers	120	100	-	-
12	Coloured photocopiers	50	41.7	70	58.3
13	Television sets	100	83.3	20	16.7
14	World Wide Web (WWW)	24	20.0	96	80.0
15	Internet Connectivity	78	65.0	42	35.0

Table 5 shows the range of ICT tools acquired for use by academic libraries in Nigeria. Principal among the ICT tools often acquired for use by academic libraries in Nigeria as indicated by the respondents include computes (100%), monochromes printers (100%), photocopiers (100%), scanners (83.3%), television sets (83.3%) and internet connectivity (65.0%). Although internet is not an ICT tool as such that could be bought off the shelf same way other ICT tools are acquired, libraries invest in its connectivity in order to globalize their reach/contact and secure access to vast amount of current and requisite information and databases for effective operations in the provision of information to library users.

The following types of ICT tools could be classified as having moderate utilitarian value to the libraries because of the number of respondents that were positive about their acquisition and application in libraries operations, and they include coloured printers (41.7%) and coloured photocopiers (41.7%). Irrespective of the demonstrable usefulness of ICT tools, the least of the acquired ICT tools including those yet to be acquired and put to use by academic libraries in the country include barcode readers (4.2%), WWW (20.0%), CCTV (0.0%) and reprographic machines with embedded software (0.0%). The use of landline telephone is progressively becoming outdated in Nigeria with the advent of mobile telephone devices. As shown in Table 5 only 12 (8.3%)

respondents indicated the use of landline telephones in their libraries for occasional communications.

COMPUTER LITERACY

The frequently reported universal impact of ICT/computers on the way things are done nowadays has been acknowledged by researchers. To say the least, ICT has permeated every facet of human life and activities to the extent that it has become expedient for every career man or woman to acquire a high level of computer/ICT literacy. The acquisition of high level of computer/ICT literacy is necessary especially for those working or planning to work in the libraries and other information centres in a globalizing and knowledge economy. In order to determine whether the respondents were computer literate or not in the unfolding information society in Nigeria, research question two was asked to be addressed.

Research Question 2: What is the level of computer literacy/proficiency of librarians in academic libraries in Nigerian universities?

The analysis of the responses proffered by the respondents in respect to whether or not the respondents were computer literate or not is contained in Table 6.

Table 6: Computer Literacy among Academic Librarians

S/N	Computer literacy	Frequency	Percentage (%)
1	Yes	103	85.8
2	No	17	14.2
Total		120	100

The results clearly indicate that as high as 103 (85.3%) respondents were computer literate while only 17 (14.2%) respondents were not computer literate. Judging by the number of the respondents that were computer literate in the selected academic libraries, it could be argued that many librarians have high level of ICT proficiency so as to be able to work effectively in any libraries in Nigeria or elsewhere in the world. With almost all the librarians having knowledge of ICT, expending money to acquire ICT for use in academic libraries in the universities become justified. The question then is how many of the responding academic librarians can trouble shoot, write elementary programs, configure and prime newly acquired systems for use? Responding to this prompting, only 11 (9.2%) of the responding librarians indicated they could configure and prime newly

acquired systems for use following inbuilt instructions and procedures on how to do it. None of the respondents could trouble shoot and none could program. Also laying credence to this are the results contained in Tables 7 and 8 respectively. Table 7 is meant to unravel the use of ICT to effect catalogue, classify and abstract documents in the technical service unit of the library insofar as this is the section most academic librarians dread to be posted.

Table 7: Use of ICT in Library Support Technical Services

S/N	Services	Responses	
		Yes	No
1	Using MARC to aid cataloguing and classification	36 (30.0%)	84 (70.0%)
2	Appropriate management software to Abstract documents	12 (10.0%)	108 (90.0%)
3	Control of volume of catalogue/ classification operations to avoid redundancy	-	120 (100%)
4	Construction of gateways to electronic resources	-	120 (100%)

Table 7 shows that the respondents that indicated they could not use MARC in cataloguing dominated the responses obtained from the respondent. To this end, only 36 (30.0%) respondents could use MARC/any other software to carry out cataloguing operations as against 84 (70.0%) that could not. This response pattern was also replicated in the case of abstracting documents using appropriate management software inasmuch as only 12 (10.0%) respondents indicated they could classify documents using appropriately primed ICT as against 108 (90.0%) that could not. This result clearly signifies that maximum use of ICT tools in the libraries that would guarantee expected maximum gains is far from being realizable in Nigeria. That none of the respondents irrespective of their claim to being computer literate could actually construction of gateways to electronic resources or control catalogue/ classification operations to avoid redundancy using ICT tools is worrisome. Creating gateways will afford libraries the ability to control access which is different from having flat HTML pages that will support collection of commensurable data (Franklin and Plum, 2004) or the compilation of user statistics.

To ascertain the extent of use of ICT in the various sections/units of the libraries in Nigerian universities, research question 3 was asked for answers to be provided.

Research Question 3: To what extent do academic libraries in Nigerian universities apply ICT in performing technical operations?

Table 8: Application of ICT in Various Sections of the Libraries

S/N	Sections	Responses			
		Very High Extent	High Extent	Low Extent	Very Low Extent
1	Cataloguing/classification	5 (4.2%)	7 (5.8%)	-	108 (90.0%)
2	Acquisition	28 (23.3%)	18 (15.0%)	14 (11.7%)	60 (50.0%)
3	Readers	30 (25.0%)	18 (15.0%)	29 (24.2%)	43 (35.8%)
4	Serials	28 (23.3%)	14 (11.7%)	18(15.0%)	60 (50.0%)

The responses contained in Table 8 depict a non-significant use of ICT in the various sections that made up academic libraries in Nigeria. Even when the results in the columns tagged 'very high extent' and 'high extent' were collapsed, the most impressive of the results that signifies considerable use of ICT was in the readers/circulation section where 40.0% of the respondents acceded to using ICT. While 42 (35.0%) respondents were positive about their use of ICT in serials section, only 12 (10.0%) respondents conceded to applying ICT in cataloguing and classification section to catalogue and classify documents. With this revealed unimpressive and gloomy picture about the application of ICT in academic libraries in Nigerian universities, one wonders what the benefits have been which the libraries have actually derived from ICT acquisition and application over the years.

INHIBITORS OF ICT ACQUISITION AND APPLICATION IN THE LIBRARIES

Acquisition and application of ICT in libraries hardly go without one form of limiting factor or the other. It is in respect of this section addressed itself to the analysis of those factors that serve as inhibitors to the acquisition and application of ICT in academic libraries in universities in Nigeria. To assist the process, research question four drawn and answered in line with the specific objective.

Research Question 4: What are the factors inhibiting acquisition and application of ICT in academic libraries?

Table 9: Factors that Inhibit Acquisition and Application of ICT in Academic Libraries

S/N	Items	Responses			
		Very High Extent	High Extent	Low Extent	Very Low Extent
1	Cost of ICT acquisition	47 (39.1%)	68 (36.7%)	5 (4.2%)	-
2	Inadequate funding	100 (83.3%)	20 (16.7%)	-	-
3	Internal politics	120 (100)	-	-	-
4	Inadequate infrastructure	98 (81.7%)	22 (18.3%)	-	-
5	Epileptic power supply	120 (100%)	-	-	-
6	Lack of skilled systems analysts/engineers	110 (91.7%)	10 (8.3%)	-	-
7	University librarians	85 (70.8%)	20 (16.7%)	15 (12.5%)	-

In spite of the potential benefits ICT could offer academic libraries, libraries are still faced with plethora of challenges all of which are surmountable but for lack of commitment. Table 9 shows some of the menacing inhibitors to academic libraries' acquisition and application of ICT with internal politics (100%), epileptic power supply (100%) and lack of skilled systems analysts/engineers (91.7%) and inadequate funding (83.3%) as the most critical of the inhibitors. As many as 98 (81.7%) respondents in the academic libraries studied generally agreed to a very extent that inadequate ICT infrastructure in their various libraries is a remarkable inhibitor to the application of ICT. Poor predisposition of the university librarians is among the strongly acknowledged inhibitors to ICT acquisition and application in the academic libraries in Nigeria as indicated by 85 (70.8%) respondents. According to the respondents, a university librarian that is not computer literate and at the same time poor in technology literacy will definitely not be favourably disposed towards expending huge amount of money to acquire ICT for library use and least of all to train those that would like to be systems analysts/engineers.

Research Question 5: What are the benefits academic libraries in Nigeria derive from the acquisition and application of ICT?

Table 10: Academic Libraries' Gains from Acquisition and Application of ICT

S/N	Gains Derived	The Extent of Agreement of Respondents			
		Very High Extent (%)	High Extent (%)	Low Extent (%)	Very Low Extent (%)

1	Improved information services to users	47 (39.1)	38 (31.7)	5 (4.2)	30 (25.0)
2	Reduced job related pains and stress	-	20 (16.7)	100 (83.3)	-
3	Enhanced library administration	-	30 (25.0)	90 (75.0)	-
4	Improved workers efficiency	-	22 (18.3)	98 (81.7)	-
5	Improved public image	120 (100)	-	-	-
6	Enhanced Job satisfaction	15 (12.5)	10 (8.3)		95 (79.2)
7	Improved professionalism of librarianship	15 (12.5)	10 (8.3)	17(14.2)	78 (65.0)
8	Overall reduction of library operative costs	-	-	-	120 (100)

As Table 10 has shown to a very high extent, the highest gain academic libraries in Nigeria derived from acquisition and application of ICT is improved public image as 120 (100%) respondents indicated and improved information services to library users. This excellent claim by academic librarians about improved public image tends to correlate with improved information services to library users. This is, however, followed by enhanced job satisfaction (12.5%) and improved professionalism of librarianship (12.5%). It is also very clear from Table 10 that overall reduction of library operative costs as indicated by all the 120 (100%) respondents is accounted for as part of the gains accruing from the acquisition and use of ICT in the libraries. According to respondents, coordinated spending on ICT acquisition and application must be the dominant paradigm in the various libraries before any form of monetary gains through cost reduction could be anticipated. Reduced job related pains and stress (83.3%), improved workers efficiency (81.7%) and enhanced library administration (75.0%) as academic library gains from their acquisition and application of ICT are low by the respondents' rating.

DISCUSSION OF FINDINGS

It is a known fact that every academic library in Nigeria strives to be ICT compliant as informed by the following perceived reasons. Apart from the necessity to retain relevance in the eyes of the users and the public, the needs to speed up library operations, acquisition process, charging and discharging of books, and effective serials management constitute some of the leading perceived reasons academic libraries in Nigerian universities acquire and apply ICT. To this end, the libraries own and use the following ICT tool, computers, printers, mobile phones, photocopy machines all with

100%relative frequency. This was in line with Madu et,al (2007) finding as they show that ICTs are applied to operations in libraries and information centers to ensure information delivered is timely, accurate, precise and relevant. None of the libraries acquired and use close circuit television to monitor sections of the library in order bring about minimization or completely eradication of theft and vandalizing library materials. Also not in use are reprographic machine with embedded software in which case operations in the bindery section of the libraries are still dependent on manual and physical labour.

In the area of ICT proficiency, 85.8% of academic librarians are computer literate and can ICT to perform some library related tasks. This no withstanding, majority of the librarians were deficient in higher order proficiency especially when it comes to performing complex library tasks using ICT tools. As the study has shown, none of the responding academic librarians could trouble shoot, develop simple program using any of the programming languages; and none could create gateways to enable libraries control access to their resources. Even at this, designing database drive websites for academic libraries was also discovered to be beyond the computer/ICT literacy skills of the academic librarians that participated. The only correction to this discouraging low level of functional computer/ICT literacy of academic librarians in Nigeria is empowerment through serious and rigorous training through workshops, seminars, short courses and/or oversea training.

On the factors inhibiting the acquisition and application of ICT in academic libraries in Nigeria, internal politics, epileptic power supply, lack of skilled systems analysts/engineers, and inadequate funding were identified as significantly limiting to the processes of ICT acquisition and application in the libraries studied. Inadequate ICT infrastructure and poor predisposition of the university librarians to ICT projects were also significant as inhibitors to ICT acquisition and applications in Academic libraries in Nigeria. With all the identified overabundance problems associated with ICT acquisition and use, academic libraries in Nigeria are unable to significantly appropriate and maximize the potentials ICT has to offer in doing their job. These finding could be corroborated by Ojedokun, (2007), Garcha and Buttler (1996) and Rosenberg (1998).

To justify the views of the above, it was revealed by Ifidon (1999) in his example that, in Nigeria, it is mandatory that at least 5% of the total budget of the universities

been allocated to the libraries. As at the time of this study, investigation shows that there is no minimal standard of allocation to university libraries in Nigeria. Thus, full-scale automation of library operations is rare in Africa (Rosenberg, 1998). Major constraints to library automation among others include the low level of infrastructural development, inadequate funding, and inadequate technical support. University libraries championed the use of information technology (IT) in universities, although the adoption and use differ widely between libraries (Rosenberg, 1998).

Foremost among the benefits academic libraries in Nigeria derive from ICT acquisition and application is improved public image, reduced job related pains and stress, improved workers efficiency and enhanced library administration. Given the result so far, it could be stressed that except concerted efforts are made to properly coordinate and fund ICT acquisitions and applications in academic libraries in Nigeria, librarians might as well continue to live self-deception by claiming to be enjoying benefits accruable to their counterpart academic libraries in technologically advanced countries of the world.

CONCLUSION

ICT acquisition and application in academic libraries have the potential to offer innumerable benefits to the professionalization of librarianship in Nigeria through enhanced library operations and the provision of information services to library users. This in other words approximates the main objective function of academic libraries in Nigerian which is the provision of information to service the plethora of information needs of teaming users classified as faculty members, students, researchers and other scholarly inclined members of the academic community. Despite the prevalent nature of ICTs that could be use in virtually every aspects of library operations, the technologies have not been adequately and maximally utilized in most libraries in Nigeria. To this end, appropriate funding, provision of requisite infrastructure, periodic staff development and training are needed for the libraries to secure their professional jurisdiction.

REFERENCES

Abifarin, E.P. (1993). *Availability and use of technology in Nigeria University libraries.* *Library Review*, p 14.

Aina, L.O (2004). *Library and information science text for Africa.* Ibadan, Third world information, Pp 27-32, 301-325.

Chisenga, J. (1995). The skills of information technology in Zambian libraries. ***Africa Journal of library Archives and Information Science,*** vol. 5 (1) pp 19-24.

Dictionary of Library and Information Science (2004), Edited by Reitz Joan .M. Westport Library Unlimited.p34

Educational Testing. (2003). ***Information and communications technology*** (ICT) retrieved from

Ejuetami E.T. (2008). *The impact of information and communication technology on teaching and learning resources.* Project submitted to Department of library and information science. Unpublished.

Ekoja. I.I. (2007). Information and communication technology ICT knowledge, use and skills of libraries in Nigeria university libraries, ***Communicate: Journal of Library and Information Science,*** Vol. 9 (1) p 1-12

Falaiye Z.M (2002). Application of computers in academic libraries. ***Communicate: Journal of Library and Information Science,*** Vol (3) 1&2 P 50.

Fatoki, C.O (2004). ***Impact of library resources and the Internet in undergraduate students research:*** university of Ibadan, Nigeria. Nigerian libraries,38 (1):P21-23

Franklin, B. and Plum, T. (2004). Library usage patterns in the electronic information environment. ***Information Research***, **9**(4) paper 187 [Available at http://InformationR.net/ir/9-4/paper187.html]

Haliso, Y. (2011). Factors affecting information and communication technologies (ICTs) use by academic librarians in Southwestern Nigeria. Library of Philosophy and Practice [Available at http://unllib.unl.edu/LPP/]

Ifidon, S.E.(1999). ***Essentials of Africa University Library management,*** Lagos. The National Library press, P 15.

Kolawale .S. (1999). *Effective library use,* Ibadan, Business & Consultancy Service, P 21.

Mutula S.M and Ojedokun A.A. (2008). ***Digital libraries. Information and knowledge Management in digital age: concept, technologies and African Perspective*** Aina, L.O, Mutula S.M and Tiamiyu M.A (eds) Ibadan, Third world information, P 93-102.

Mutula, S. and Moahi, K.H. (2008). *Institutional frame work for the information society in Africa*. Information and knowledge management in digital age: concept, technologies and African perspective, **by Aina L.O, Mutula S.M, Tiamiyu, M.A (eds)** Ibadan, Third world information, P 179- 170.

Obinyan, G.A (2008) Location of Publishing firms- Information and Communication Technologies and Use of Language as Factors Affecting Sustainable Development of Book Publishing in Nigeria, ***Communicate: Journal of Library and Information Science,*** vol.10 (1) p 9-10

Odion F. and Adetona C; (2009) Information and communication technology ICT as a tool for effective performance by academic libraries in Edo state of Nigeria *Communicate: Journal of Library and Information Science,* vol. 11 (1) Pp 27-30.

Ogunrombi, S.A. and Marama, I.D (1995) **Information and communication technology (ICT) librarians knowledge, use and skills in Nigeria university libraries.** *Communicate; Journal of Library and Information Science.* 9 (1) June, 2007.

Ojedokun A.A (2007). *Information literacy for tertiary education students in Africa,* Ibadan, Third world information, P.8.

Ojedokun A.A (2008). *Transition to Automated library information systems and challenges for libraries in Africa.* Information and knowledge management in digital age: concept, technologies and African Perspective**, Ania, L.O, Mutula S.M, Tiamiyu, M.A (eds) Ibadan, Third world information**, P 122- 123

Vinitha, K, Kanthimathi, S. and Tharani, D (2006). *Impact of information and communication on library and it services.* **DRTS ICT conference on Digital learning environment, 11th- 13th January, 2006, Bangalore, India.**